

A Synopsis of *Dicranopselaphus* (Coleoptera: Psephenidae, Eubriinae), with Descriptions of Nine New Species

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Abstract. Twenty-six species of the genus *Dicranopselaphus* Guérin-Méneville are dealt with in this paper. Nine new species are described: *D. dentatus* sp. nov. [India], *D. gressitti* sp. nov. [China], *D. imparis* sp. nov. [Vietnam], *D. laevis* sp. nov. [Vietnam], *D. luzonensis* sp. nov. [Philippines], *D. raii* sp. nov. [Nepal], *D. septemspinus* sp. nov. [Myanmar], *D. spadix* sp. nov. [Nepal], and *D. sumatrensis* sp. nov. [Indonesia]. The following new synonyms are proposed (junior synonyms in square brackets): *Dicranopselaphus emmanueli* (Pic, 1918) [= *Dicranopselaphus nagaii* Lee et Yang, 1996 and *Dicranopselaphus sakaii* Lee et Yang, 1996], *Dicranopselaphus multimaculatus* (Pic, 1934) [= *Dicranopselaphus emasensis* Lee et Yang, 1996 and *D. schneideri* Lee et Yang 1996], *Dicranopselaphus sabahensis* Lee et Yang, 1996 [= *Dicranopselaphus sarawacensis* Lee et Yang, 1996], *Dicranopselaphus nantai* Lee et Yang, 1996 [= *Dicranopselaphus taiwanus* Lee et Yang, 1996], *Dicranopselaphus rufus* (Pic, 1916) [= *Dicranopselaphus yamasakii* Lee et Yang, 1996], *Dicranopselaphus malickyi* Lee et Yang, 1996 [= *Dicranopselaphus morimotoi* Lee et Yang, 1996]. Keys to males of all the species-groups are provided.

Key words: Coleoptera, Psephenidae, *Dicranopselaphus*, systematics, Oriental region.

Introduction

The genus *Dicranopselaphus* Guérin-Méneville is one of the two eubriine genera (the other is *Ectopria* LeConte) which are widely distributed in Asia and the New World. The Oriental species of *Dicranopselaphus* were reviewed taxonomically by Lee and Yang (1996). The present study re-evaluates those species proposed by Lee and Yang (1996), after examination of about 250 additional specimens deposited in various museums and institutes. The classification of the species-groups still follows Lee and Yang (1996).

In the species descriptions the following abbreviations are used: WP=maximum width of pronotum; LP=length of middle of pronotum; WE=maximum width of elytra; LE=maximum length of elytron. The eubriine group of male genitalia has complex and consisting of several appendages for which there exists no terminology. We apply the following terms (see Figs. 19 & 23): A=paired appendages articulating with penis; B=paired appendages articulating with appendages A; C=paired appendages articulating with appendages B; E=a sclerotic derivation from

fibula.

Acronyms

BPBM	Bernice P. Bishop Museum, Honolulu
CNC	Canadian National Collection, Biosystematics Research Centre, Ottawa
NHMW	Naturhistorisches Museum, Wien
MHNG	Muséum d'Histoire naturelle, Geneva
NMB	Naturhistorisches Museum, Basel
NTU	National Taiwan University, Taipei
NWU	Nagoya Women's University, Nagoya
TMB	Természettudományi Múzeum, Budapest

List of *Dicranopselaphus* species in the Oriental Region

I. *Dicranopselaphus emmanueli* group

1. *D. brevicornis* Lee et Yang Indonesia (Sumatra)
2. *D. emmanueli* (Pic) Philippines, Malaysia, Indonesia (Sumatra)
3. *D. flavus* Lee et Yang East Malaysia
4. *D. multimaculatus* (Pic) Malaysia, Indonesia (Kalimantan)
5. *D. sabahensis* Lee et Yang East Malaysia

II. *Dicranopselaphus jaechi* group

6. *D. jaechi* Lee et Yang Indonesia (Java)
7. *D. luzonensis* sp. nov. Philippines (Luzon)
8. *D. sumatrensis* sp. nov. Indonesia (Sumatra)
9. *D. spadix* sp. nov. Nepal

III. *Dicranopselaphus reticulataus* group

10. *D. jiangxiensis* Lee et Yang China (Jiangxi)
11. *D. nantai* Lee et Yang Taiwan
12. *D. laevis* sp. nov. Vietnam
13. *D. reticulatus* (Nakane) Japan (Amami-Ōshima)
14. *D. similis* Lee et Yang China (Fujian, Hong Kong)

IV. *Dicranopselaphus rufus* group

15. *D. doiinthanonus* Lee et Yang Thailand, Vietnam, Laos
16. *D. gressitti* sp. nov. China (Hubei)
17. *D. dentatus* sp. nov. India
18. *D. rufus* (Pic) China (Yunnan), Thailand, Malaysia, Singapore, Indonesia (Sumatra)

V. *Dicranopselaphus malickyi* group

19. *D. bicolor* Lee et Yang China (Yunnan)
20. *D. fangensis* Lee et Yang Thailand
21. *D. malickyi* Lee et Yang Thailand
22. *D. nepalensis* Lee et Yang Nepal, India
23. *D. raii* sp. nov. Nepal
24. *D. sichuanensis* Lee et Yang China (Sichuan)
25. *D. septemspinus* sp. nov. Myanmar
26. *D. imparis* sp. nov. Vietnam

Species incertae sedis

27. *D. javanus* (Pic) Indonesia (Java)
28. *D. testaceicornis* (Pic) China (Shandong)

I. *Dicranopselaphus emmanueli* group***Dicranopselaphus brevicornis* Lee et Yang**

Dicranopselaphus brevicornis Lee et Yang, 1996, 173.

Remarks. This species is very close to *D. sabahensis*, but differs from the latter by its longer fibula, shorter penis and parallel sides of the basal piece in the aedeagus, and the smaller elytral meshes.

Material examined. 11♂♂ (NMB), G. Sibayak, 1,450–1,900 m, Brastagi, N. Sumatra, 19–23-II-1991, Bocak & Bocakova leg.; 1♂ (NMB), G. Sinabung, 1,300–1,800 m, 30 km SW of Brastagi, N. Sumatra, 22-II-1991, Bocak & Bocakova leg.; 1♂ (NHMW), Simpang Silalahi, Dairi Distr., Sumatra, 8-XII-1992, Barries & Cate leg.

Distribution. Indonesia (Sumatra).

***Dicranopselaphus emmanueli* (Pic)**

Grammeubria emmanueli Pic, 1918, 13.

Grammeubria atra Pic, 1938, 1.

Dicranopselaphus brevicornis Lee et Yang, 1996, 173 (part).

Dicranopselaphus nagaii Lee et Yang, 1996, 175. Syn. nov.

Dicranopselaphus sakaii Lee et Yang, 1996, 178. Syn. nov.

Remarks. *Dicranopselaphus nagaii* and *D. sakaii* should be regarded as geographic variations of *D. emmanueli*, since there are no significant differences between them, though only the aedeagi are slightly different. *Dicranopselaphus emmanueli* is characterized by its oval body form. Additionally, some of the paratypes of *D. brevicornis*, which were collected from Borneo, belong to *D. emmanueli*.

Material examined. 3♂♂ (BPBM), S. Franisco, 10 km SE, Agusan, Mindanao, Philippines, 13-XI-1959, L. W. Quate leg.; 1♂ (BPBM), Mis. Or., Mt. Pomalihi, 21 km W. of Gingoog City, 800–1,000 m, Mindanao, Philippines, 15-IX-1965, M. Torrevillas leg. (light trap); 1♀ (BPBM), Bat Cave, Surigao, L. Mainit, Mindanao, Philippines, 28-XI-1959, C. M. Yoshimoto leg.; 1♂ (BPBM), Mt. Mayon, 16 km NW of Lagaspi, 900–1,000 m, Albay Prov., Philippines, 18-V-62, H. M. Torrevillas leg.; 1♂ (NMB), Port Barton, 150 m, Palawan, Philippines, 14–18-XII-1990, Bolm leg.; 1♂ (NMB), N. P. Tanbank Riv. Val. 300 m, Cleopatra Needle, Palawan, 20–22-XII-1990, Bolm leg.; 3♂♂ (BPBM), Kalabakan Primary Forest, N. Borneo, 10–19-XI-1958, T. C. Maa leg.; 1♂ (BPBM), Primary Forest, Kalabakan, Tawau District, N. Borneo, 8–15-XI-1958, T. C. Maa leg.; 4♂♂ (BPBM), Bidi, Bau District, 90–240 m, Sarawak, Borneo, 3-IX-1958, T. C. Maa leg.; 1♂ (BPBM), Pangkalan Tebang, 300–450 m, Bau District, Sarawak, Borneo, 5-IX-1958, T. C. Maa leg.; 1♂ (BPBM), Gunong Matang, 120 m, Sarawak, Borneo, 13-IX-1958, J. L. Gressitt leg.; 2♂♂ (BPBM), Bidi secondary forest, Sarawak, 3-IX-1958, T. C. Maa leg.; 1♂ (NHNG), Langan Falls, 900–950 m, Poring Hot Springs, Sabah, 12-V-1987, Burckhardt–Lobl leg.; 1♂ (NHNG), Aceh, Mt Leuser NP, 300–500 m, Ketambe, Sumatra, 23–30-XI-1989, Lobl Agosti, Burckhardt leg.; 1♂ (TMB), Borneo Kinabalu; 1♂ (CNC), Semongok, 12 m. S. of Kuching, Sarawak, 12-XII-1974, A. Earnshaw leg. (at light); 1♂ (NHMW), Batu Punggul, primary forest, Sabah, Borneo, 24-VI-1-VII-1996.

Distribution. Philippines (Luzon, Mindanao, Palawan), Malaysia (Borneo), Indonesia (Sumatra).

***Dicranopselaphus flavus* Lee et Yang**

Dicranopselaphus flavus Lee et Yang, 1996, 174.

Remarks. This species is very close to *D. sabahensis*, but is easily distinguished from the latter by its yellowish brown coloration and shorter antennae.

Material examined. 1 ex. (NHMW), Gunung Emas, Highland Resort, 1,500–1,700 m, Crocker Range, Sabah, 8–18-VI-1996.

Distribution. East Malaysia.

***Dicranopselaphus multimaculatus* (Pic)**

Ectopria multimaculata Pic, 1934, 564.

Dicranopselaphus multimaculatus: Lee et Yang, 1996, 180.

Dicranopselaphus emasensis Lee et Yang, 1996, 178. Syn. nov.

Dicranopselaphus shneideri Lee et Yang, 1996, 181. Syn. nov.

Remarks. This species is easily distinguished from other species by the pale yellow elytra with the darkened and visible meshes, and the rounded apices of maxillary and labial palpi.

Material examined. 1♂ (BPBM), Bidi, 90–240 m, Bau District, Sarawak, Borneo, 3-IX-1958, T. C. Maa leg.; 1♂ (BPBM), Pangkalan Tebang, 300–450 m, Bau District, Sarawak, Borneo, 5-IX-1958, T. C. Maa leg.; 1♀ (BPBM), Tenompok, N. Borneo, 15-II-1959, T. C. Maa leg.; 1♀ (BPBM), same data as the previous one, but with "1460 m, Jesselton, 48 km E, 10–19-II-1959".

Distribution. Malaysia (Borneo), Indonesia (Kalimantan).

***Dicranopselaphus sabahensis* Lee et Yang**

Dicranopselaphus sabahensis Lee et Yang, 1996, 177.

Dicranopselaphus sarawacensis Lee et Yang, 1996, 178. Syn. nov.

Remarks. *Dicranopselaphus sarawacensis* is a geographic variation of *D. sabahensis*.

Material examined. 2♂♂ (BPBM), Tenompok, 1,460 m, Jesselton, 48 km E, N. Borneo, 10–19-II-1959, T. C. Maa leg.; 1♂ (BPBM), same data as previous one, but lacking "1460 m. Jesselton, 48 km E"; 1♂ (BPBM), Ranau, N. Borneo, 22–25-II-1959, T. C. Maa leg.; 1♀ (BPBM), Tambunan, N. Borneo, 8-I-1959, T. C. Maa leg.; 2♂♂ (MHNG), Mt. Kinabalu, N. P. Liwagu Rv. Tr. 1,495–1,550 m, Sabah, Borneo, 12-VIII-1988, A. Smetana leg.

Distribution. East Malaysia (Sabah, Sarawak).

Key to the species of the *Dicranopselaphus emmanueli* group

1. Apices of maxillary and labial palpi rounded; elytra pale yellow and translucent, elytral meshes darker *D. multimaculatus* (Pic)
- Apices of maxillary and labial palpi bifurcate; elytra yellowish brown to blackish brown, with white pubescence 2

2. Body form oval (LE/WE=1.0) *D. emmanueli* (Pic)
- Body form oblong (LE/WE=1.1–1.2) 3
3. Coloration yellowish brown, antenna relatively shorter *D. flavus* Lee et Yang
- Coloration blackish brown, antenna relatively longer 4
4. Elytral meshes smaller; fibula longer and penis shorter *D. brevicornis* Lee et Yang
- Elytral meshes larger; fibula shorter and penis longer *D. sabahensis* Lee et Yang

II. *Dicranopselaphus jaechi* group

***Dicranopselaphus jaechi* Lee et Yang**

Dicranopselaphus jaechi Lee et Yang, 1996, 181.

Remarks. This species is very close to *D. sumatrensis*, but differs from the latter by the strongly recurved baso-lateral apophyses of appendages A and the presence of appendages B on the male aedeagus.

Distribution. Indonesia (Java).

***Dicranopselaphus luzonensis* sp. nov.**

(Figs. 1–3)

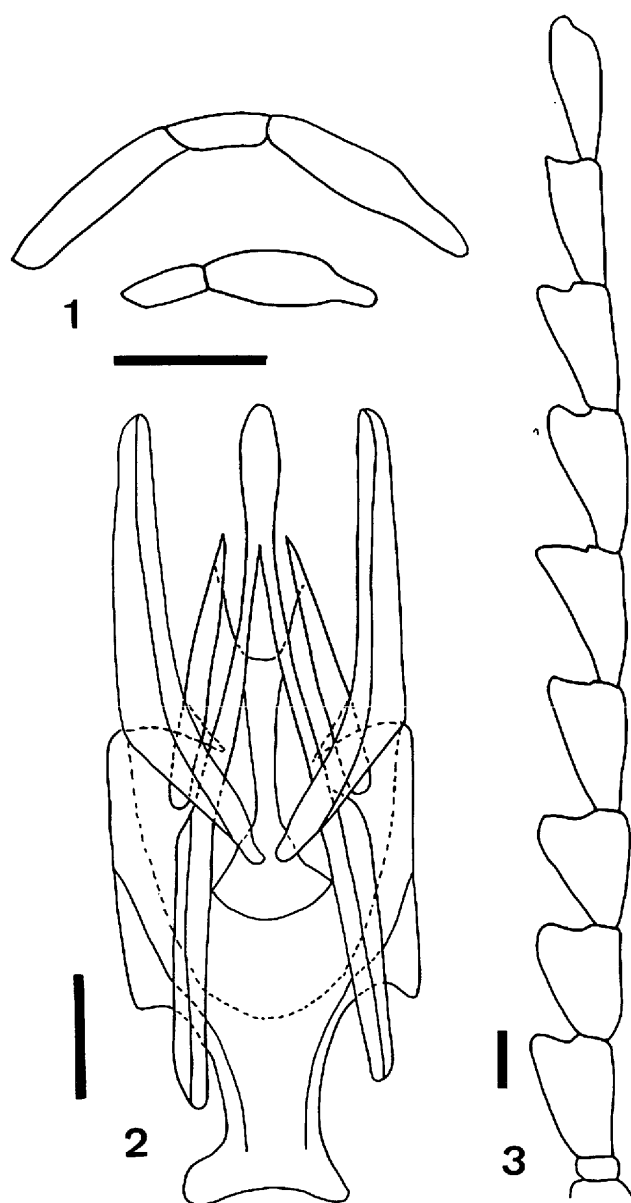
Type series. Holotype: ♂ (BPBM), Mayoyao, 1,000–1,500 m, Ifugao, Mt. Prov., Luzon, Philippines, 1-VII-1966, H. M. Torrevillas leg. Paratypes: 1♂ (BPBM), same data as holotype; 1♂ (BPBM), Mayoyao, 1,200–1,500 m, Ifugao, Mt. Prov., Philippines, 2-IX-1966, H. M. Torrevillas leg.; 1♂ (NTU), same data as the former one, but with "27-VII-1966".

Male. 2.3–2.8 mm long, 1.6–1.9 mm wide. Coloration yellowish brown, but eyes black and antennae blackish brown. Antenna (Fig. 3) serrate from segments 3 to 10, gradually narrowed from segments 3 to 5; segment 5 the shortest, and then lengthened toward apex; segments 3–5 much shorter than the others. Maxillary palpus (Fig. 1) slender, terminal segment narrowed apically, apex narrowly rounded, relative lengths of segments 2–4 about 2.0 : 1 : 2.4. Labial palpus small, about 0.47 times as long as maxillary palpus, terminal segment similar to that of maxillary palpus, relative lengths of segments 2–3 about 1 : 2.3. WP/LP=2.3–2.8. LE/WE=1.1–1.2. WP/WE=0.8.

Genitalia (Fig. 2). Aedeagus 630 μm, about 2.7 times as long as wide. Penis elongate, apex narrowly rounded, narrowest at apical 1/5, and then gradually widened toward base. Parameres very slender and elongate, about 0.45 times as long as tegmen. Appendages A slender, apex acute and hook-like, about 0.3 times as long as penis.

Female. Unknown.

Diagnosis. *Dicranopselaphus luzonensis* is character-



Figs. 1-3. *Dicranopselaphus luzonicus* sp. nov.; 1, maxillary (upper) and labial (lower) palpi; 2, aedeagus, dorsal; 3, male antenna. Scale=0.1 mm.

ized by the slender apex of penis, the rounded apices of maxillary and labial palpi and the slender 10th and 11th antennal segment.

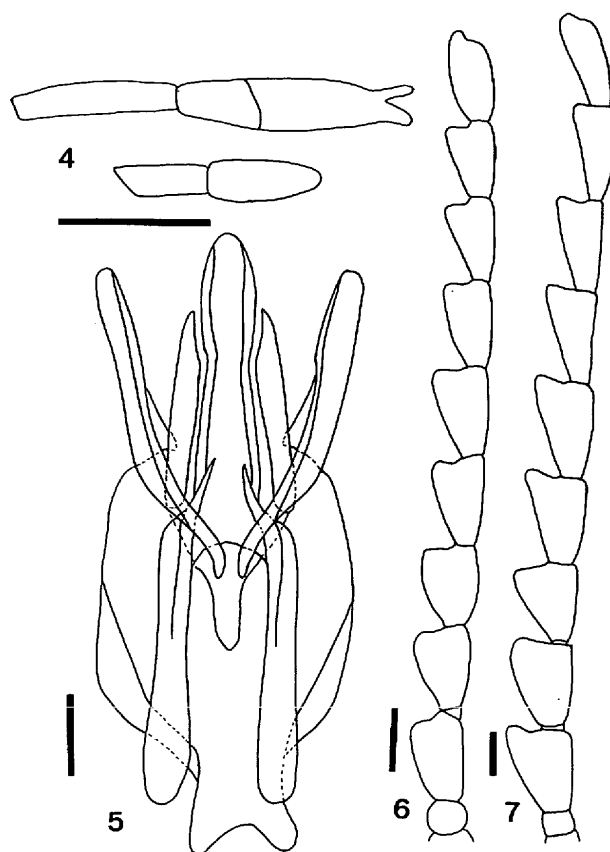
Etymology. Referring to the type locality.

Distribution. Only known from the type locality on Luzon, the Philippines.

***Dicranopselaphus spadix* sp. nov.**

(Figs. 4-7)

Type series. Holotype: ♂ (CNC), Godavari, 5000', Kathmandu, Nepal, Mal. Tr., Can. Exp. Paratypes: 2♂♂, 1♀ (CNC, NTU), same data as for the holotype.



Figs. 4-7. *Dicranopselaphus spadix* sp. nov.; 4, maxillary (upper) and labial (lower) palpi; 5, aedeagus, dorsal; 6, female antenna; 7, male antenna. Scale=0.1 mm.

Male. 2.3 mm long, 1.6 mm wide. Coloration chestnut brown, but eyes black, pronotum darkened, and labial palpus pale yellow. Antennae (Fig. 7) serrate from segments 3-10, gradually narrowed from segments 3 to 5; segment 5 the shortest, and then lengthened toward apex; segments 3-5 much shorter than the others. Maxillary palpus (Fig. 4) slender; segments 3 and 4 not distinctly separated; apex with two processes unequal in width, relative lengths of segments 2-4 about 2.2 : 1 : 2.1. Labial palpus small, about 0.51 times as long as maxillary palpus, apex truncate; relative lengths of segments 2-3 about 1 : 1.3. $WP/LP=2.2$. $LE/WE=1.1$. $WP/WE=0.8$.

Genitalia (Fig. 5). Aedeagus 740 μ m, about 2.5 times as long as wide. Penis elongate, apex narrowly rounded, slightly narrowed at apical 1/4, and then gradually widened toward apical 1/3, and gradually narrowed toward middle, abruptly widened at middle, subparallel from middle to base; baso-lateral apophyses basally dilated. Parameres very slender and elongate, about 0.35 times as long as tegmen. Appendages A slender, apex acute and hook-like, about 0.4 times as long as penis.

Female. 3.0 mm long, 2.0 mm wide. Similar to male except for antennae (Fig. 6) which are shorter and relatively weakly serrate. $WP/LP=2.3$. $LE/WE=1.2$. $WP/WE=0.8$.

Diagnosis. *Dicranopselaphus spadix* and *D. luzonensis* are easily distinguished from the other two species by lacking recurved baso-lateral apophyses of appendages A of the aedeagus. *Dicranopselaphus spadix* differs from *D. luzonensis* by the chestnut brown coloration, the wider penis in apical half, the bifurcate apices of the maxillary palpi and the somewhat stout antennae.

Etymology. Spadix (Latin: chestnut), referring to the coloration of body.

Distribution. So far known only from the type locality in Nepal.

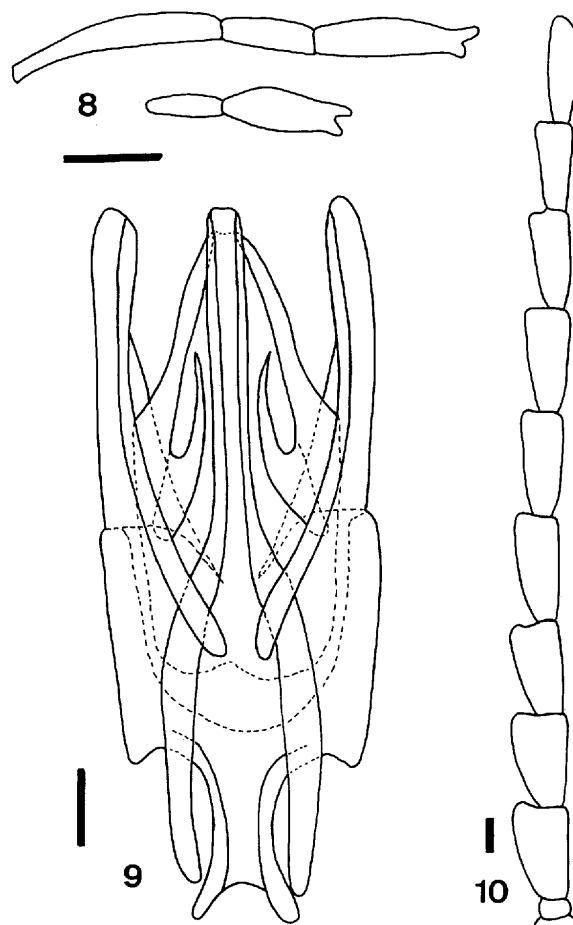
Dicranopselaphus sumatrensis sp. nov.

(Figs. 8-10)

Type series. Holotype: ♂ (NMB), Sibayak, 1,450-1,900 m, Brastagi G., N. Sumatra, 19-23-II-1991, Bocak & Bocakova leg. Paratypes: 28♂♂, 1♀ (NMB, NTU), same data as for the holotype; 1♂ (NMB), Gunung Kerindi, 1,800-2,100 m, Jambi, Sumatra, 6-7-III-1991, Bocak & Bocakova leg.; 1♂ (NMB), G. Singgalang, S. of Bukittinggi, 1,300 m, W. Sumatra, 14-16-II-1991, Bocak & Bocakova leg.; 3♂♂ (NMB), G. Merapi, S. of Bukittinggi, 1,050-1,800 m, W. Sumatra, 11-III-1991, Bocak & Bocakova leg.

Male. 3.1 mm long, 2.2 mm wide. Head blackish brown except for two basal segments of antennae paler; pronotum and venter dark brown except for prosternum and tarsi paler; scutellum and elytra chestnut but elytral meshes darker. Antennae (Fig. 10) similar to those of *D. spadix* and *D. luzonensis*, but more weakly serrate. Maxillary palpus (Fig. 8) slender; apex with two processes unequal in length and width, relative lengths of segments 2-4 about 2.3 : 1 : 1.8. Labial palpus small, about 0.45 times as long as maxillary palpus, apex with two processes unequal in length and width; relative lengths of segments 2-3 about 1 : 1.7. $WP/LP=2.4$. $LE/WE=1.1$. $WP/WE=0.7$.

Genitalia (Fig. 9). Aedeagus 730 μm, about 2.6 times as long as wide. Penis elongate; apex very narrowly rounded, very slightly emarginate at middle; apical process very slender, parallel from apex to middle, then abruptly widened toward basal 1/3, and then subparallel or slightly narrowed toward base. Parameres very slender and elongate, about 0.45 times as long as tegmen. Baso-lateral apophyses of append-



Figs. 8-10. *Dicranopselaphus sumatrensis* sp. nov.; 8, maxillary (upper) and labial (lower) palpi; 9, aedeagus, dorsal; 10, male antenna. Scale=0.1 mm.

ages A strongly recurved, acute and hook-like. Appendages B absent.

Female. 3.8 mm long, 2.6 mm wide. Similar to male except for antennae which are shorter and weakly serrate. $WP/LP=2.5$. $LE/WE=1.1$. $WP/WE=0.8$.

Diagnosis. This species is very close to *D. jaechi*, but differs in its more slender penis, the shorter appendages A, the absence of appendages B in the aedeagus, chestnut coloration, and the filiform antennae.

Etymology. Referring to the type locality.

Distribution. Indonesia (Sumatra).

Key to the species of the *Dicranopselaphus jaechi* group

1. Baso-lateral apophyses of appendages A of aedeagus recurved2
- Baso-lateral apophyses of appendages A of aedeagus not recurved3
2. Appendages B present; the recurved baso-lateral apophyses of appendages A long; penis wider in

- apical half.....*D. jaechi* Lee et Yang
- Appendages B absent; recurved baso-lateral apophyses of appendages A short; penis shorter in apical half*D. sumatrensis* sp. nov.
3. Apices of maxillary and labial palpi rounded; segmentation between segments 3 and 4 of maxillary palpus distinct; penis slender in apical half*D. luzonensis* sp. nov.
- Apex of maxillary palpus bifurcate; that of labial palpus rounded; penis wide in apical half*D. spadix* sp. nov.

III. *Dicranopselaphus reticulatus* group

Dicranopselaphus jiangxiensis Lee et Yang

Dicranopselaphus jiangxiensis Lee et Yang, 1996, 183.

Material examined. 1♂, 1♀ (BPBM), Wong-sashue, S. Kiangsi, China, 8-VII-1936, L. & M. Gressitt leg.

Distribution. China (Jiangxi).

Dicranopselaphus nantai Lee et Yang

Dicranopselaphus nantai Lee et Yang, 1996, 183.

Dicranopselaphus taiwanus Lee et Yang, 1996, 186. Syn. nov.

Material examined. 1♂ (BPBM), Urai, Taiwan, 1-V-1934, J. L. Gressitt leg.; 3♂♂ (BPBM), Wulai nr. Taipei, 300–500 m, Taiwan, 23-IV-1958, K. S. Lin leg.

Distribution. Taiwan.

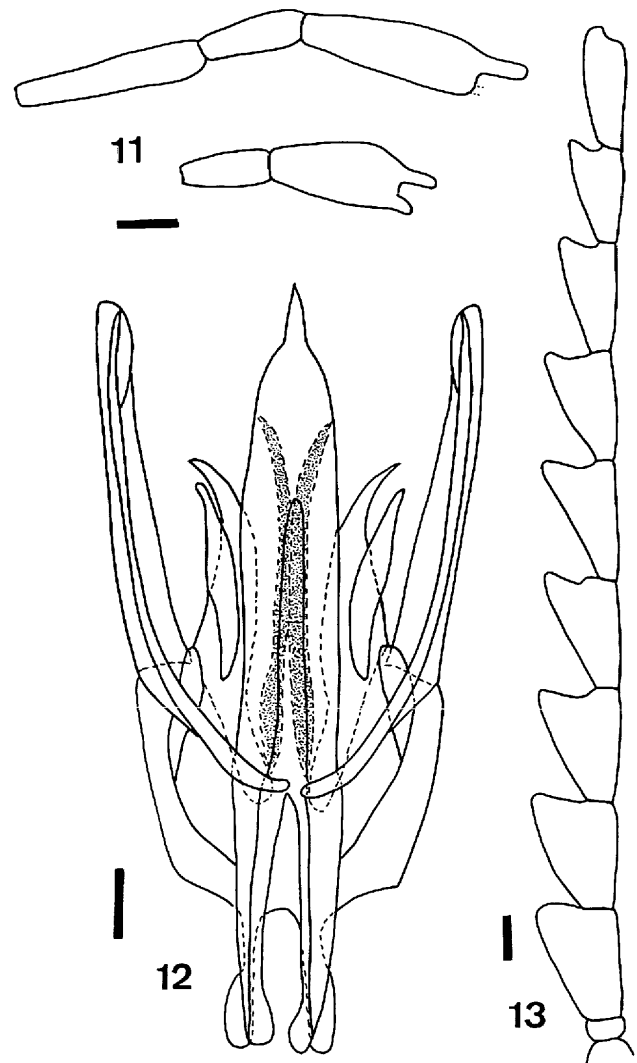
Dicranopselaphus laevis sp. nov.

(Figs. 11–13)

Type series. Holotype: ♂ (BPBM), Fyan, 1,200 m, Vietnam, 11-VII-9-VIII-1961, N. R. Spencer leg.

Male. 3.1 mm long, 2.2 mm wide. Coloration chestnut brown; eyes black, pro- and mesosterna yellowish brown, maxillary and labial palpi pale yellow. Antennae (Fig. 13) serrate from segments 3–10; segments 3–11 similar in length, gradually narrowed toward apices. Maxillary palpus (Fig. 11) slender, terminal segment apically dilated, apex strongly emarginate, with two processes (one lost), relative lengths of segments 2–4 about 1.8:1:2.3. Labial palpus small, about 0.50 times as long as maxillary palpus; terminal segment dilated in apical 1/3; apex strongly emarginate, with two processes unequal in length and width; relative lengths of segments 2–3 about 1:1.8. WP/LP=2.7. LE/WE=1.1. WP/WE=0.8.

Genitalia (Fig. 12). Aedeagus 1,110 μm, about 2.5 times as long as wide. Penis elongate, acute at apex, abruptly widened at apical 1/12, and then subparallel from apical 1/12 to base. Parameres very slender and elongate, about 0.5 times as long as tegmen. Appendages A short, moderately curved, about 0.53 times as



Figs. 11–13. *Dicranopselaphus laevis* sp. nov.; 11, maxillary (upper) and labial (lower) palpi; 12, aedeagus, dorsal; 13, male antenna. Scale=0.1 mm.

long as penis. Appendages B very short, slightly curved, about 0.3 times as long as penis. Appendages C well developed, elongate and slender; apex slightly curved; about 0.5 times as long as penis.

Female. Unknown.

Diagnosis. This species is characterized by its shorter appendages A and B, the separate and smooth appendages C of the aedeagus and the serrate antennae.

Etymology. From Latin (smooth), indicating its smooth penis and appendages C of the aedeagus.

Distribution. So far known only from the type locality, Vietnam.

Dicranopselaphus reticulatus (Nakane)

Spineubria reticulata Nakane, 1952, 39.–Satō, 1968, 140.

Dicranopselaphus reticulatus: Lee et Yang, 1996, 184.

Distribution. Japan (Amami-Ōshima Island).

Dicranopselaphus similis Lee et Yang

Dicranopselaphus similis Lee et Yang, 1996, 185.

Material examined. 1♂ (BPBM), N. T. Taipokau, Hong Kong, 14-VI-1965, Lee Kit Ming & Hui Wai Ming leg.; 1♂ (BPBM), Shaowu, Tachulan, 1,000 m, Fukien, S. China, 10-VI-1942, T. Maa leg.

Distribution. China (Fujian, Hong Kong).

Key to the species of the *Dicranopselaphus reticulatus* group (for aedeagi only)

1. Scale-like impression absent on appendages B·····*D. laevis* sp. nov.
- Scale-like impression present on appendages B····· 2
2. Scale-like impression present at bases of appendages B; outer margin of appendages C denticulate·····3
- Scale-like impression absent at bases of appendages, outer margin of appendages C smooth·····4
3. Appendages A of aedeagus slightly curved·····*D. similis* Lee et Yang
- Appendages A of aedeagus strongly curved·····*D. nantai* Lee et Yang
4. Appendages A strongly curved near apices, appendages B and C wide·····*D. reticulatus* (Nakane)
- Appendages A moderately curved near apices, appendages B and C slender·····*D. jiangxiensis* Lee et Yang

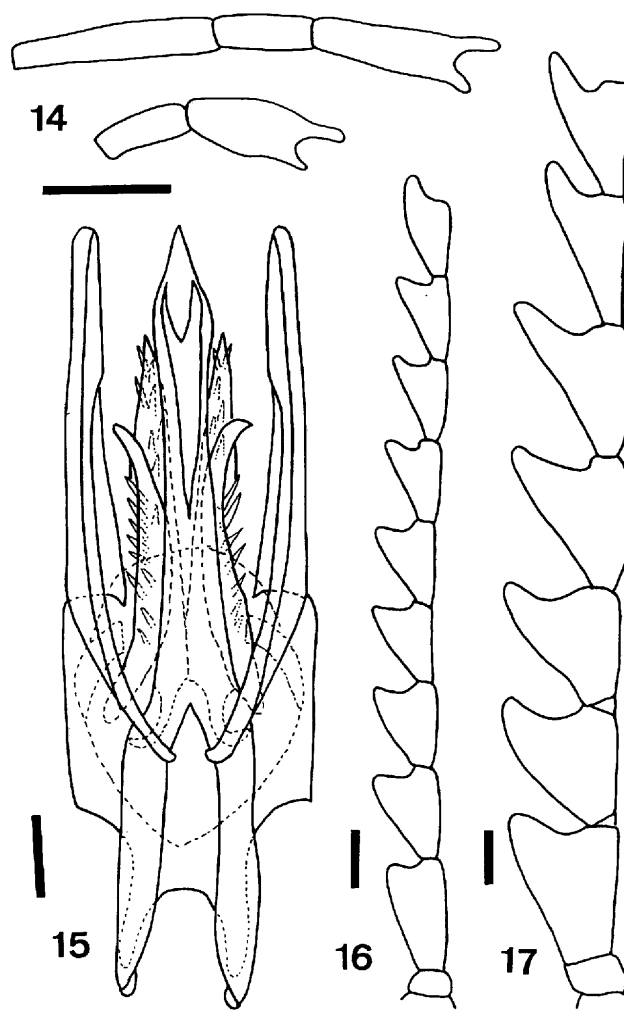
IV. *Dicranopselaphus rufus* group

Dicranopselaphus dentatus sp. nov.

(Figs. 14-17)

Type series. Holotype: ♂ (NHMW), Maghalaya, W Garo Hills, Balphakram NP, 25° 11' N 90° 51' E, 300-500 m, N. E. India, 22-27-V-1996, Jendek & Sausa leg. Paratypes: 2♀ (NTU), same data as for the holotype; 1♂ (NTU): Maghalaya, W Garo Hills, Bagmara, ca. 1,000 m, 25° 11.5' N 90° 38.5' E, Jendek & Sausa leg.

Male. 2.9 mm long, 2.0 mm wide. Coloration yellowish brown, but eyes black. Antennae (Fig. 17) serrate from segments 3-9 (10-11 lost), progressively narrowed from segments 3 to 9; segments 4 and 5 shorter than the others. Maxillary palpus (Fig. 14) slender, apex with two processes unequal in length, relative lengths of segments 2-4 about 2.1:1:1.9. Labial palpus small, about 0.50 times as long as maxillary palpus; terminal segment medially dilated; apex strongly emarginate, with two processes unequal in length and width; relative lengths of segments 2-3



Figs. 14-17. *Dicranopselaphus dentatus* sp. nov.; 14, maxillary (upper) and labial (lower) palpi; 15, aedeagus, dorsal; 16, female antenna; 17, male antenna. Scale=0.1 mm.

about 1:1.7. WP/LP=2.6. LE/WE=1.1. WP/WE=0.9.

Genitalia (Fig. 15). Aedeagus 950 μm, about 3.2 times as long as wide. Penis elongate, narrowly rounded at apex, abruptly widened at apical 1/12, then subparallel from apical 1/12 to basal 1/3, abruptly widened at basal 1/3, and then subparallel from basal 1/3 to base. Parameres very slender and elongate, about 0.5 times as long as tegmen. Fibula well developed and elongate. Appendages A well developed, apically curved and elongate, about 0.7 times as long as penis. Appendages B well developed, elongate and slender, armed with many and teeth about 0.5 times as long as penis. Appendages C absent.

Female. 3.2 mm long, 2.2 mm wide. Similar to male, but antennae (Fig. 16) shorter and weakly serrate. WP/LP=2.4. LE/WE=1.1. WP/WE=0.8.

Diagnosis. This species is close to *D. rufus*, but

differs from the latter by its longer appendages A, the denticulate and longer appendages C, the absence of appendages A of the aedeagus and more angulate antennae.

Etymology. From Latin (toothed), indicating the appendages B armed with teeth.

Distribution. So far known only from the type locality in India.

***Dicranopselaphus doiinthanonus* Lee et Yang**

Dicranopselaphus doiinthanonus Lee et Yang, 1996, 187.

Material examined. 1♂ (NMB), Palong, 750 m 19°55' N 99°06' E, Thailand, 26–28-V-1991, Vit Bukan leg.; 1♂ (NWU), Deo Pha Din, Son La Prov., Vietnam, 6-V-1995, A. Saito leg.; 1♂ (NMB), Sapa, N. Vietnam, 11–19-VI-1990, Brantlova leg.; 2♂♂ (NTU, NHMW), Luan Namtha env., 800–1,200 m, N. Laos, V-1997.

Distribution. Thailand, Vietnam, Laos.

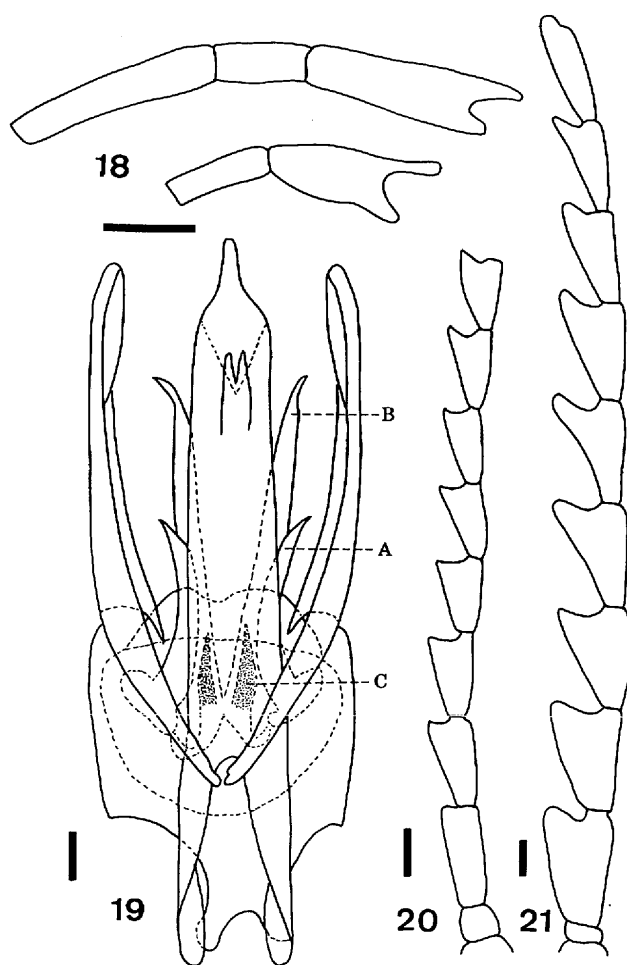
***Dicranopselaphus gressitti* sp. nov.**

(Figs. 18–21)

Type series. Holotype: ♂ (BPBM), Suisapa, Lichuan, Hupeh Pr., China, 1-VII-1948, J. L. Gressitt leg. Paratypes: 1♂ (BPBM), Suisapa, 1,000 m, Lichuan Distr., W. Hupeh, China, 3-VII-1948, J. L. Gressitt leg.; 1♂ (BPBM), Sui-sa-pa, W. Hupeh, Lichuan Dist., China, 5-VIII-1948, L. & M. Gressitt leg.; 2♂♂ (BPBM), same data as the previous one, but with 27-VII-1948, J. L. Gressitt leg.; 1♀ (BPBM), Suisapa, Lichuan, Hupeh Pr., China, 3-VIII-1948, J. L. Gressitt leg.; 1♀ (BPBM), Hupeh, Hsiaoho, China, 10-VIII-1948, J. L. Gressitt leg.

Male. 3.0 mm long, 2.0 mm wide. Coloration yellowish brown, but eyes black, and antennae darkened. Antennae (Fig. 21) serrate from segments 3–10; segment 3 the widest, gradually narrowed toward apex; segments 9 and 10 slender. Maxillary palpus (Fig. 18) slender, apex with two processes unequal in length, relative lengths of segments 2–4 about 2.5 : 1 : 2.5. Labial palpus small, about 0.53 times as long as maxillary palpus; apex strongly emarginate, with two processes unequal in length and width; relative lengths of segments 2–3 about 1 : 1.6. WP/LP=2.4. LE/WE=1.1. WP/WE=0.8.

Genitalia (Fig. 19). Aedeagus 1460 μm, about 3.0 times as long as wide. Penis elongate, narrowly rounded at apex, abruptly widened at apical 1/12, and then subparallel from apical 1/12 to base. Parameres very slender and elongate, about 0.5 times as long as tegmen. Fibula reduced. Appendages A well developed, moderately curved, about 0.6 times as long as



Figs. 18–21. *Dicranopselaphus gressitti* sp. nov.; 18, maxillary (upper) and labial (lower) palpi; 19, aedeagus, dorsal; 20, female antenna; 21, male antenna. Scale=0.1 mm.

appendages B. Appendages B well developed, very elongate and slender; about 0.5 times as long as penis. Appendages C reduced, very short, about 0.2 times as long as appendages B.

Female. 3.2 mm long, 2.3 mm wide. Similar to male, but antennae (Fig. 20) shorter and weakly serrate. WP/LP=2.4. LP/WP=1.1. 0.8.

Diagnosis. This species is very close to *D. doiinthanonus*, but differs from the latter by its reduced appendages A in the aedeagus and angulate 10th segment of antennae.

Etymology. Named after the late Dr. J. L. Gressitt, an eminent entomologist.

Distribution. China (Hupei).

***Dicranopselaphus rufus* (Pic)**

Grammeubria rufa Pic, 1916, 3.

Spineubria yasumatsui Chûjô et M. Satô, 1975, 319.

Dicranopselaphus rufus: Lee et Yang, 1996, 188.

Dicranopselaphus yamasakii Lee et Yang, 1996, 189. Syn. nov.

Ramarks. This species is characterized by the appendages B of about the same length as C of the aedeagus.

Material examined: 7♂♂, 1♀ (NMB), Xinjie, 23.14N 104.34E, 1,250–1,500 m, Yunnan, China, 24-VI-1994, Vit Kuban leg.; 4♂♂ (BPBM), Ulu Gombak Station, 16 km Kuala Lumpur to Bentong Rd., Selangor Distr., Malaysia, V-1966, K. J. Frogner leg.; 1♂ (BPBM), Penang, Malaysia, 22-26-XII-1958, L. W. Quate leg.; 1♂ (BPBM), Kepong, 130–300 m, 13-21-III-1966, J. & M. Sedlacek leg. (M. V. light trap); 1♂ (BPBM), Kepong Forest Res., Selangor, Malaysia, 12-III-1958, J. Sedlacek leg. (light trap); 1♂ (NMB), G. Siggalang S of Bukittinggi, 1,300 m, Sumatra, 14-16-II-1991, Bocak & Bocakova leg.; 1♂ (NHNG), Chandero Dam, 250 m, Perak, Malaysia, 10-12-X-1974, Pfanner leg.; 5♂♂, 6♀♀ (NMB), Johor Endau, Rompin NP, 100 m, Selangor, Pahang, Malaysia, 28-II-12-III-1995, Strba & Hergovits leg.; 2♂♂ (NWU), Pi Tam, S. Thailand, 7-VIII-1987, M. Satô leg.; 4♂♂, 1♀ (NWU), Khao Sok, S. Thailand, 11-VIII-1987, M. Satô leg.; 1♂ (NTU), Oudomxay, Laos, 12-13-V-1996, C.-F. Lee leg.

Distribution. China (Yunnan), Laos, Thailand, West Malaysia, Singapore, Indonesia (Sumatra).

Key to the species of the *Dicranopselaphus rufus* group (for aedeagi only)

1. Appendages C absent, appendages B armed with teeth*D. dentatus* sp. nov.
- Appendages C visible, appendages B without teeth2
2. Appendages C very short, about 0.2 times as long as appendages B*D. gressitti* sp. nov.
- Appendages C long, about 0.5 times as long as appendages3
3. Appendages B relatively shorter, about 0.3–0.5 times as long as penis; appendages C about 0.6 times as long as appendages B ...*D. rufus* (Pic)
- Appendages B relatively longer, about 0.7 times as long as penis; appendages C about 0.4 times as long as appendages B*D. dointhanonus* Lee et Yang

V. *Dicranopselaphus malickyi* group

***Dicranopselaphus bicolor* Lee et Yang**

Dicranopselaphus bicolor Lee et Yang, 1996, 190.

No additional material examined.

Distribution. China (Yunnan).

***Dicranopselaphus fangensis* Lee et Yang**

Dicranopselaphus fangensis Lee et Yang, 1996, 191.

Material examined. 2♂♂ (NHMW), Ban Si Lang, 1,200 m, Mae Hong Son, NW. Thailand, 23-31-V-1992, J. Horak leg.; 4♂♂, 1♀ (NHMW), bor. Chiang Dao env., Thailand, 21-V-4-VI-1995, M. Snizek leg.

Distribution. Thailand.

***Dicranopselaphus imparis* sp. nov.**

(Figs. 22–25)

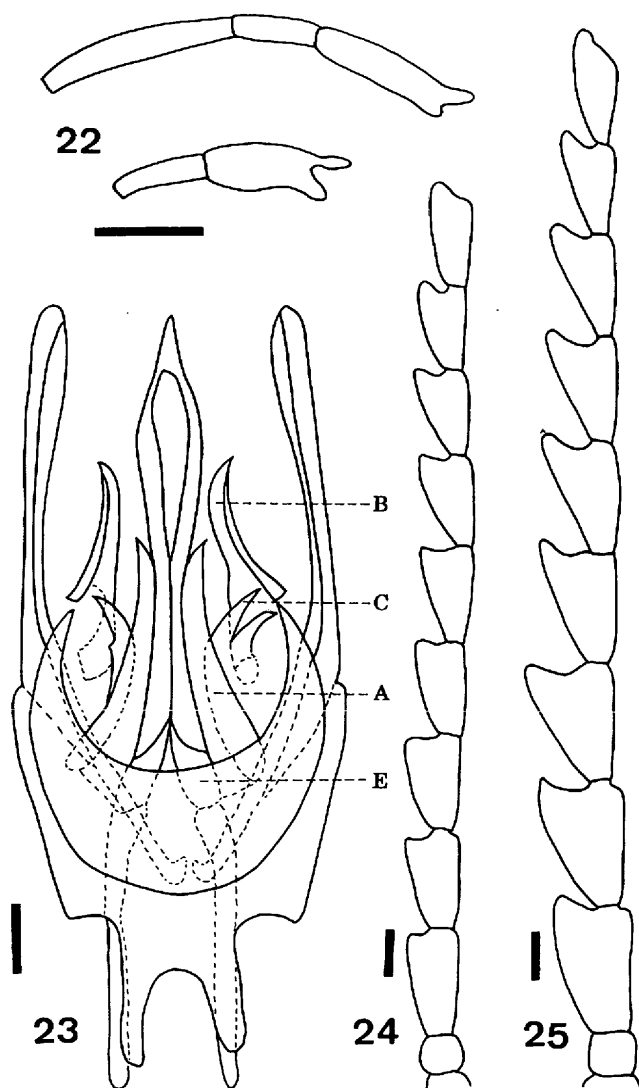
Type series. Holotype: ♂ (NMB), Tamdao, Pr. Vinhphu, Vietnam, 2-11-VI-1985, Vit Kuban leg. (Preiwilliger Museumseverein Basel 1987). Paratypes. 3♂♂ (NMB), same data as for the holotype; 1♂, 3♀♀ (NMB), Sapa, N. Vietnam, 11-18-VI-1990, A. Olexa leg.

Male. 3.4 mm long, 2.3 mm wide. Coloration yellowish brown, but eyes black and antennae darkened. Antennae (Fig. 25) serrate from segments 3–10; segment 3 the longest; segment 4 the widest, then gradually narrowed toward apex. Maxillary palpus (Fig. 22) slender, apex with two processes unequal in length, relative lengths of segments 2–4 about 2.3 : 1 : 2.2. Labial palpus small, about 0.50 times as long as maxillary palpus, apex strongly emarginate, with two processes unequal in length and width; relative lengths of segments 2–3 about 1 : 1.6. WP/LP=2.4. LE/WE=1.1. WP/WE=0.8.

Genitalia (Fig. 23). Aedeagus 1,150 μm, about 2.5 times as long as wide. Penis elongate, very narrowly rounded at apex, abruptly widened at apical 1/12, gradually narrowed toward middle, and then gradually widened toward base. Parameres very slender and elongate, about 0.5 times as long as tegmen. Appendages A well developed, slightly curved, about 0.3 times as long as penis. Appendages B well developed, moderately curved, about 0.2 times as long as penis. Appendages C very short, moderately curved. One additional appendage short and moderately curved, connected with right appendage C. Appendages E arising from apical 1/12 of penis, fused together from middle to basal 1/5.

Female. 3.4–4.1 mm long, 2.3–3.1 mm wide. Similar to male except for antennae (Fig. 24) which are shorter and weakly serrate. WP/LP=2.5–2.6. LE/WE=1.1–1.2. WP/WE=0.7–0.9.

Diagnosis. This species is very close to *D. malickyi*, but differs from the latter by its shorter appendages A and by having an additional appendage on the aedeagus and somewhat stout 11th antennal segment in



Figs. 22–25. *Dicranopselaphus imparis* sp. nov.; 22, maxillary (upper) and labial (lower) palpi; 23, aedeagus, ventral; 24, female antenna; 25, male antenna. Scale=0.1 mm.

female.

Etymology. From Latin (odd), indicating the uneven appendages in the aedeagus.

Distribution. Vietnam.

***Dicranopselaphus malickyi* Lee et Yang**

Dicranopselaphus malickyi Lee et Yang, 1996, 192.

Dicranopselaphus morimotoi Lee et Yang, 1996, 193. Syn. nov.

Remarks. Obviously, *D. morimotoi* should be a synonym of *D. malickyi*. The extended aedeagus of *D. morimotoi* resulting from the mode of treatment looks like that of *D. malickyi* in natural condition.

Material examined. 1♂ (NHNG), Doi Chiangdao, NW Pass, 1,200–1,300 m, Chiangmai Prov., Thailand, 4-VII-1984, Banziger leg.; 1♂ (NHNG), Doi Ang-

khang, 1,450 m, Fang Dist., Thailand, 24-VIII-1990, P. Schwendinger leg.

Distribution. Thailand.

***Dicranopselaphus nepalensis* Lee et Yang**

Dicranopselaphus nepalensis Lee et Yang, 1996, 194.

Material examined. 3♂♂, 2♀♀ (NMB), Lagyap, 2,500 m, Sikkim, India, 2-VII-1984, Ch. J. Rai leg.; 4♂♂, 1♀ (NMB), Chitre-Tatopani, 2,500–1,100 m, C. Nepal, 11-V-1984, C. Holzschuh leg.; 2♂♂ (NMB), Kalimpong, Darjeeling, India, XI-1984, D. Ch. J. Rai leg.; 2♀♀ (NMB), Chongay, 1,700 m, Sikkim, India, 20-IV-1985, Ch. J. Rai leg.; 1♀ (NMB), Sunk, 900 m, Darjeeling, India, 18-IV-1985, D. Ch. J. Rai leg.

Distribution. Nepal, India.

***Dicranopselaphus raii* sp. nov.**

(Figs. 26–28)

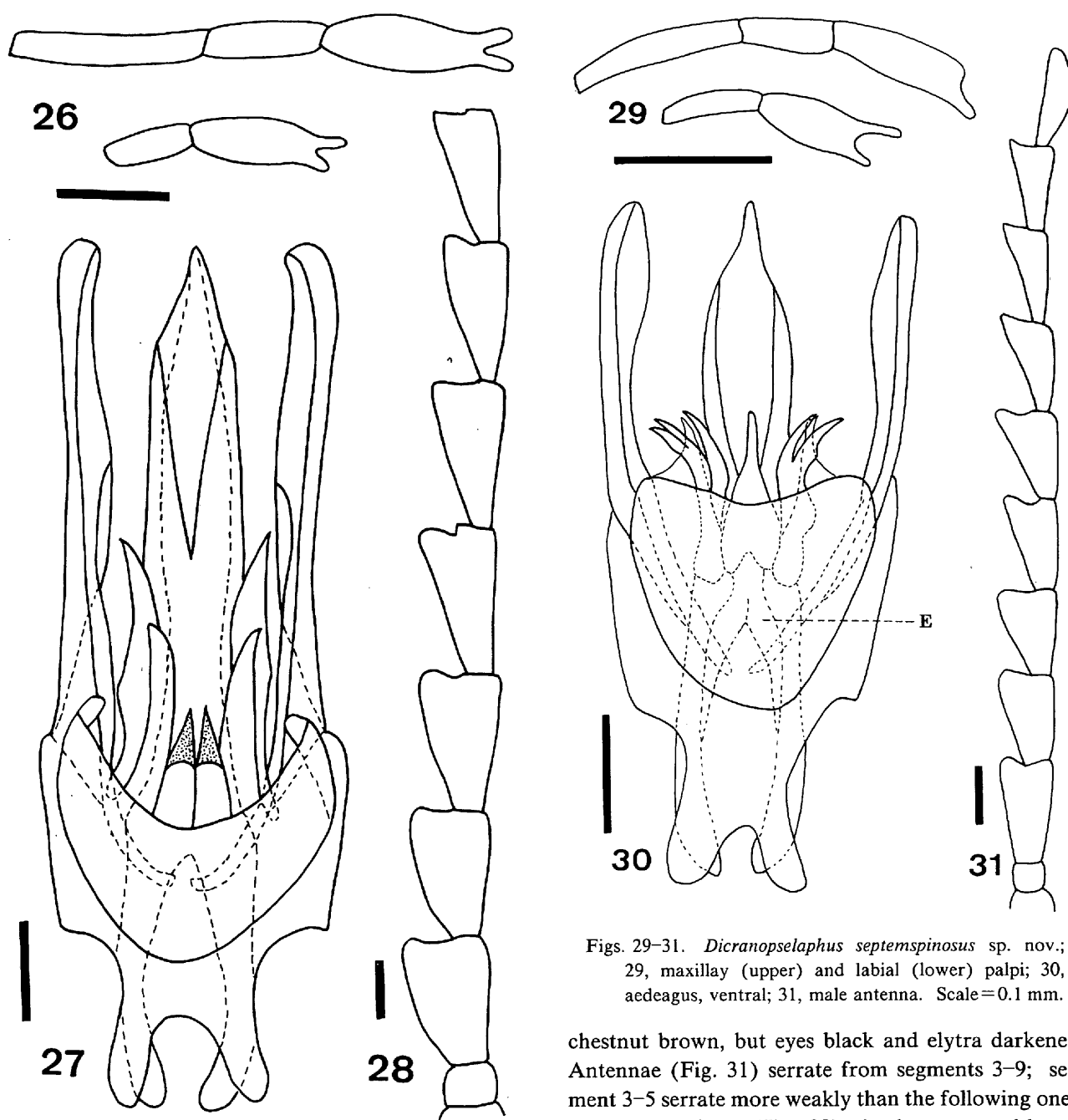
Type series. Holotype: ♂ (NMB), Godavari, 1,500–2,500 m, Kathmandu V., C. Nepal, 1-VII-1987, C. J. Rai leg. Paratypes: 2♂♂ (NMB), same data as for the holotype.

Male. 3.2 mm long, 2.2 mm wide. Coloration chestnut brown, but eyes black and pronotum darkened. Antennae (Fig. 28) serrate from segments 3–9 (10–11 lost); segment 3 the widest; segments 3–5 shorter than the following ones; segments 4 and 5 wider than 6–9. Maxillary palpus (Fig. 26) slender, apex with two processes unequal in width, relative lengths of segments 2–4 about 1.6 : 1 : 1.6. Labial palpus small, about 0.48 times as long as maxillary palpus; terminal segment medially dilated; apex strongly emarginate, with two processes unequal in length and width; relative lengths of segments 2–3 about 1 : 1.7. WP/LP=2.6. LE/WE=1.2. WP/WE=0.6.

Genitalia (Fig. 27). Aedeagus 870 μm, about 2.8 times as long as wide. Penis elongate, very narrowly rounded at apex, abruptly widened at apical 1/12, and then subparallel from apical 1/12 to base. Parameres very slender and elongate, about 0.6 times as long as tegmen, slightly dilated near apices. Fibula reduced. Appendages A well developed, slightly curved, about 0.3 times as long as penis. Appendages B shorter and moderately curved, about 0.2 times as long as penis; apex of left one bifurcate or not. Appendages C very short, with acute apex.

Diagnosis. This species is very close to *D. sichuanensis*, but differs from the latter by its shorter appendages A and the longer appendages B in male genitalia and more or less slender antennae.

Etymology. Dedicated to the collector, Ch. J. Rai.



Figs. 26-28. *Dicranopselaphus raii* sp. nov.; 26, maxillary (upper) and labial (lower) palpi; 27, aedeagus, ventral; 28, male antenna. Scale=0.1 mm.

Distribution. So far known only from the type locality in Nepal.

***Dicranopselaphus septemspinosus* sp. nov.**

(Figs. 29-31)

Type series. Holotype: ♂ (NWU), 10 mile S of Putao Mulashidi, 540 m, N. Kachin, Myanmar (Burma), 12-VI-1998, Shinji Nagai leg.

Male. 2.6 mm long, 2.0 mm wide. Coloration

Figs. 29-31. *Dicranopselaphus septemspinosus* sp. nov.; 29, maxillary (upper) and labial (lower) palpi; 30, aedeagus, ventral; 31, male antenna. Scale=0.1 mm.

chestnut brown, but eyes black and elytra darkened. Antennae (Fig. 31) serrate from segments 3-9; segment 3-5 serrate more weakly than the following ones. Maxillary palpus (Fig. 29) slender, apex with one distinct process, relative lengths of segments 2-4 about 2.0 : 1 : 1.8. Labial palpus small, about 0.56 times as long as maxillary palpus; terminal segment medially dilated; apex strongly emarginate, with two processes unequal in length and width; relative lengths of segments 2-3 about 1 : 1.4. $WP/LP=2.6$. $LE/WE=1.0$. $WP/WE=0.8$.

Genitalia (Fig. 30). Aedeagus 610 μ m, about 2.4 times as long as wide. Penis elongate, very narrowly rounded at apex, abruptly widened at apical 1/4, gradually narrowed toward middle, and then gradually widened toward base. Parameres very slender and elongate, about 0.5 times as long as tegmen, slightly

dilated near apices. Fibula Y-shaped. Appendages A, B and C similar in length, slightly curved, about 0.3 times as long as penis. One additional appendage, short and moderately curved, connected with left appendage C. Appendages E arising from apical 1/12 of penis, basally joining fibula.

Diagnosis. Although *D. septemspinus* is the same number of appendages of the aedeagus as *D. imparis*, the additional appendage is located at the left side from ventral view, not at the right side as in *D. imparis*. In addition, *D. septemspinus* is easily distinguished from *D. imparis* by presence of the fibula and the smaller appendages A in male genitalia and the slender antennae.

Etymology. From Latin (seven), indicating the seven appendages in the aedeagus of the present species.

Distribution. So far known only from the type locality in Myanmar.

Dicranopselaphus sichuanensis Lee et Yang

Dicranopselaphus sichuanensis Lee et Yang, 1996, 194.

Material examined. 16♂♂, 14♀♀ (NMB), Guanxian, 700 m, NW-Sichuan, China, 8-20-VII-1990, Jim Kolibac leg.; 7♂♂, 3♀♀ (NMB), Guanxian, 600 m, Sichuan, China, 12-14-VII-1990, L. & M. Bocak leg.; 1♂ (NMB), Moxi, 1,650 m, Gonggashan Mts., Sichuan, China, 28-VI-1995, Bolm leg.; 1♀ (NMB), Xiling, Snow Mts., 1,300-2,100 m, China, 29-31-VII-1996, S. Kasantsev leg.; 1♂, 8♀♀ (NMB), Sichuan Mt. Emei, 1,050 m, Sichuan, China, 18-VII-1990, L. & M. Bocak leg.

Distribution. China (Sichuan).

Key to the species of the *Dicranopselaphus malickyi* group (for aedeagi only)

1. Appendages paired2
- Appendages uneven7
2. Two pairs of appendages in aedeagus
.....*D. fangensis* Lee et Yang
- Three or 4 pairs of appendages in aedeagus ...3
3. Four pairs of appendages in aedeagus
.....*D. nepalensis* Lee et Yang
- Three pairs of appendages in aedeagus4
4. Appendages A medially or basally widened ...5
- Appendages A very slender6
5. Appendages A long (0.5 times as long as penis),
and B short (0.1 times as long as penis)
.....*D. sichuanensis* Lee et Yang
- Appendages A relatively shorter (0.3 times as
long as penis), and B relatively longer (0.2 times

- as long as penis)*D. raii* sp. nov.
6. Pronotum darker than elytra; apices of parameres
dilated*D. bicolor* Lee et Yang
 - Pronotum and elytra unicolor, apices of parameres
slender*D. malickyi* Lee et Yang
 7. Appendages A longer; one additional appendage
present at right side in ventral view; fibula absent
.....*D. imparis* sp. nov.
 - Appendages A shorter; one additional appendage
present at left side in ventral view; fibula Y-
shaped*D. septemspinus* sp. nov.

Species *incertae sedis*

Since there are no additional specimens for *D. javanus* (Pic, 1916: 3) and *D. testaceicornis* (Pic, 1923: 10), they still remain *incertae sedis*.

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